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V

Reptiles and Amphibians of the Islands of the West Coast of North America

BY

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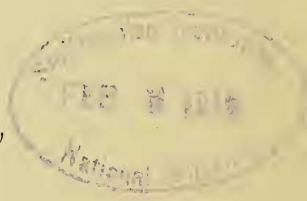

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INTRODUCTORY REMARKS.

In June, 1905, the Academy published a paper entitled "The Reptiles and Amphibians of the Islands of the Pacific Coast of North America from the Farralons to Cape San Lucas and the Revilla Gigedos." The greater portion of the edition of this paper and nearly all the specimens upon which it was based were destroyed in the great fire of April, 1906. In building up a new reptile collection for the Academy effort has been made to replace this material. Specimens of most of the species hitherto reported from these islands are now at hand, and a considerable number of kinds not previously known from various islands will be recorded in the following pages. Owing to the fact that the earlier paper is now out of print, it has been thought best to include in this one all species known from these islands, and in order to make the record more complete we have added the species known from islands in the Gulf of California, as well as those from Isabel, Las Tres Marias, Clipperton and Cocos islands.

We have at present no specimens from any of the islands in the Gulf of California or from Isabel and the Tres Marias islands. An account of the reptiles of the latter islands has been published by Dr. Stejneger in *North American Fauna* No. 14, 1899, pp. 63 to 71. The original records of the reptiles of the islands of the Gulf of California are either given or referred to in a paper on the herpetology of Lower California, published in the *Proceedings of the California Academy of Sciences,* Second Series, Vol. V, pp. 77 to 162.

In this paper the reptilian fauna of thirty-five islands is considered, and some sixty-six species and subspecies are mentioned. The island distribution of these is shown in the following table:

DISTRIBUTION OF ISLAND REPTILES AND AMPHIBIANS

NAME	Farallon	Año Nuevo	San Miguel	Santa Rosa	Santa Cruz	Ana Capa	San Nicolas	Santa Barbara	Santa Catalina	San Clemente	Los Coronados	San Martin	San Geronimo	Guadalupe	San Benito	Cerros	Natividad	Magdalena	Santa Margarita	Socorro	Clarion	Angel de la Guardia	Tiburon	San Pedro Martir	Carmen	San Jose	Espiritu Santo	Isabel	Las Tres Marias	Clipperton	Cocos
Autodax lugubris	....	....	....	....	....	....	....	....	....	....	+	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	+
Autodax lugubris farallonensis	+	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	+
Batrachoseps pacificus	....	....	+	+	+	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Batrachoseps attenuatus	....	....	....	....	....	....	....	....	+	....	+	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Hyla regilla	....	....	....	+	+	....	....	....	+	....	....	....	....	....	....	+	....	....	....	....	....	....	....	....	....	....	....	....	+	....	....
Sphaerodactylus pacificus	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Phyllodactylus tuberculosus	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Anolis nebulosus	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Anolis townsendi	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Ctenosaura teres	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Dipsosaurus dorsalis	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	+	....	....	....	....	....	....	....	....	....	+	....	....	....
Sauromalus hispidus	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	+	....	....	....	....	....	....	....	....	....
Sauromalus sp.	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	+	....	....	+	....	....	....	....	+	....	....	....	....
Callisaurus ventralis	....	....	....	....	....	....	....	....	+	+	+	....	+	....	....	+	+	+	....	....	....	....	....	....	+	....	+	....	....	....	....
Crotaphytus wislizenii	....	....	....	....	+	+	....	....	....	....	....	+	....	....	+	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Uta stansburiana	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Uta martinensis	....	....	....	....	....	....	....	....	....	....	....	+	....	....	+	....	....	....	....	....	....	....	....	+	....	....	....	....	....	....	....
Uta stellata	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	+	....	....	....	....	....	....	....	+	....	....	....	....	....
Uta palmeri	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Uta nigricauda	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	+	....	....	....	....	....	....	....	....	....	....	....	....	....
Uta microscutata	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	+	....	....	....	....	....
Uta lateralis	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	+	....	....
Uta auriculata	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	+	....	....	....	....	....	....	....	....	....	....	....
Uta clarionensis	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	+	....	....	....	....	....	....	....	....	....	....
Sceloporus boulengeri	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	+	....	+	+	....	....	....	....	....	....	+	....	+	....	....	....
Sceloporus zosteromus	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Sceloporus becki	....	....	+	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Sceloporus biseratus becki	....	....	....	+	+	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Phrynosoma cerroense	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	+	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Anniella pulchra	....	....	....	....	....	....	....	....	....	....	+	....	+	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Gerrhonotus caeruleus	....	+	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Gerrhonotus scincicauda	....	....	+	+	+	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Gerrhonotus scincicauda ignavus	....	....	....	....	....	....	....	....	+	....	+	+	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

DISTRIBUTION OF ISLAND REPTILES AND AMPHIBIANS—Continued

NAME	Farallon	Año Nuevo	San Miguel	Santa Rosa	Santa Cruz	Ana Capa	San Nicolas	Santa Barbara	Santa Catalina	San Clemente	Los Coronados	San Martin	San Geronimo	Guadalupe	San Benito	Cerros	Natividad	Magdalena	Santa Margarita	Socorro	Clarion	Angel de la Guardia	Tiburon	San Pedro Martir	Carmen	San Jose	Espiritu Santo	Isabel	Las Tres Marias	Clipperton	Cocos
Xantusia riversiana	....	....	....	....	....	....	+	+	?	+	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Verticaria hyperythra beldingi	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	+	....	+	....	....	....	....	....	....	....	....	....	....	....	....	....
Verticaria sericea	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	+	....	....	....	....	....
Cnemidophorus multiscutatus	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	+	+	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Cnemidophorus rubidus	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	+	+	....	....	....	....	+	....	....	....	....	....	....	....
Cnemidophorus martyris	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Cnemidophorus mariarum	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	+	....	....	....
Cnemidophorus gularis mexicanus	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Cnemidophorus labialis	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	+	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Eumeces skiltonianus	....	....	....	....	....	....	....	....	+	....	+	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Emoia arundelii	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	+	....
Siagonodon humilis	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	+	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Boa imperator	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	+	....	....
Oxybelis acuminatus	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	+	....	....
Drymobius boddaerti	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	+	....	....
Bascanion lineatum	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	+	....	....
Bascanion laterale fuliginosum	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	+	....	....	....	....	....	....	....	....	....	....	....	....
Bascanion anthonyi	....	....	....	....	....	....	....	....	....	....	+	....	....	....	....	....	....	....	....	....	+	....	....	....	....	....	....	....	....	....	....
Hypsiglena ochrorhynchus	....	....	....	....	....	....	....	....	....	....	+	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Pituophis catenifer	....	....	....	....	+	....	....	....	+	....	....	+	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Pituophis catenifer deserticola	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Drymarchon corais melanurus	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Lampropeltis micropholis oligozona	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Diplotropis diplotropis	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Elaps euryxanthus	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	+	....	....	....	....	....	....	....	....
Hydrus platurus	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	+	....	....	....	....
Agkistrodon bilineatus	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Crotalus sp.	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Crotalus oregonus	....	....	....	....	....	....	....	....	+	....	+	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Crotalus exsul	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	+	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Crotalus mitchellii	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	+	....	....	+	....	....	....	....	....	....	....	....	....
Kinosternon integrum	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Crocodylus americanus	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

SOUTH FARALLON ISLAND.

Only one kind of salamander is known.

1. **Autodax lugubris farallonensis** Van Denburgh.

Five specimens collected June 15-July 1, 1911, by E. W. Gifford, are Nos. 27335 to 27339.

AÑO NUEVO ISLAND.

This island was visited by Mr. R. H. Beck, July 1, 1909. He collected the following lizard:

1. **Gerrhonotus cæruleus** Wiegmann.

Eight typical specimens (Nos. 14520 to 14527) were secured. These show dark lines between the rows of ventral scales. The dorsal scales are in 16 rows in six specimens, but there are only 14 in Nos. 14520 and 14526.

SAN MIGUEL ISLAND.

One salamander and two lizards are known from this island. We visited San Miguel in April, 1913, but the weather was not favorable for collecting.

1. **Batrachoseps pacificus** Cope.

Two specimens (Nos. 36083 and 36084) were found under a piece of a fallen fence post in a little gully, April 11, 1913. The costal grooves in these specimens are 18 in number. One of these salamanders had a reddish dorsal band similar to that seen in some specimens of *Batrachoseps attenuatus* and *Plethodon cinereus*. The other showed the uniform yellowish brown coloration characteristic of all other known specimens of *B. pacificus*.

2. **Sceloporus becki** Van Denburgh.

We failed to find this lizard on San Miguel Island. The Academy collection contains only the type specimen (No. 4537) collected on San Miguel, by R. H. Beck, March 26, 1903.

3. **Gerrhonotus scincicauda** Skilton.

The only specimen collected by us on San Miguel (No. 36082) was found under a stone April 11, 1913. Its dorsal scales are in 14 rows. The temporal scales and those on the arm and forearm are smooth. The dark ventral lines run along the middles of the scale rows.

SANTA ROSA ISLAND.

During our visit in April, 1911, we secured three species. The *Hyla* had not previously been taken on this island.

1. **Batrachoseps pacificus** Cope.

We failed to find this salamander on Santa Rosa Island, although it is known to occur there.

2. **Hyla regilla** Baird & Girard.

Seventeen specimens (Nos. 36103 to 36119) collected April 12, 1913, add this tree-toad to the known fauna of Santa Rosa Island. They seem to differ in no way from mainland specimens.

3. **Sceloporus biseriatus becki** Van Denburgh.

The 17 specimens (Nos. 36086 to 36102) secured by us show the coloration characteristic of *S. becki.* All these specimens have the frontoparietal separated from the enlarged supraoculars. Femoral pores vary from 14 to 19; being 14 once, 15 eight times, 16 nine times, 17 nine times, 18 five times, and 19 once.

4. **Gerrhonotus scincicauda** Skilton.

We found one specimen (No. 36085) on Santa Rosa Island, April 12, 1913. The dorsals are in 14 rows. The temporals and limb scales are smooth. The ventral dark lines run along the middles of the rows of scales.

SANTA CRUZ ISLAND.

In the few hours we were able to devote to collecting on this island we secured two species which had not been taken there before. Six species are now known from this island.

1. **Batrachoseps pacificus** Cope.

Five specimens (Nos. 36149-36153), were taken April 13, 1913, under old bark and from rotten logs in the vicinity of Pelican Bay. Each has 18 costal folds and shows the coloration typical of this species.

2. **Hyla regilla** Baird & Girard.

We collected 12 specimens (Nos. 36137 to 36148) near Pelican Bay, April 13, 1913. They were found, several together, in cavities in decaying logs, where they probably had retreated for protection from the dry weather of summer.

3. **Uta stansburiana** Baird & Girard.

We did not secure any specimens of *Uta,* although this species is known to occur on this island.

4. **Sceloporus biseriatus becki** Van Denburgh.

Twelve specimens (Nos. 36122 to 36133) were collected April 13, 1913. All these specimens have the frontoparietal separated from the large supraoculars by a complete row of scales and show the same coloration as the Santa Rosa specimens. The femoral pores vary from 14 to 19; being 16 ten times, 17 five times, 15 three times, 18 once, and 19 once.

5. **Gerrhonotus scincicauda** Skilton.

Three specimens (Nos. 36134-36135 and 36136) were collected April 13, 1913. All three are typical of the mainland form. The dorsal scales are in 14 rows. The temporals and the plates on the forearm are smooth, while those on the hind limbs are keeled. The longitudinal lines on the under surface run along the middles of the scale rows.

6. **Pituophis catenifer** (Blainville).

We collected two specimens (Nos. 36120 and 36121) in the vicinity of Pelican Bay, April 13, 1913. No. 36120 has 29 scale rows, gastrosteges 208, urosteges 71, upper labials 8-8, lower labials 13-13, preoculars 1-1, postoculars 3-3, loreals 1-1, temporals 2+3 and 3+3, postgenials shorter, anal plate undivided.

No. 36121 has 29 scale rows, gastrosteges 199, urosteges 54, upper labials 8-9, lower labials 11-11, preoculars 1-1, postoculars 3-3, loreals, 1-1, temporals 3+4 and 4+3, postgenials shorter, anal plate undivided.

With the exception of two rattlesnakes taken on Catalina, these are the only snakes that have ever been collected on any of the California islands, although *Pituophis* also has been seen on Catalina Island.

ANA CAPA ISLAND.

We spent a few hours on Ana Capa Island, April 13, 1913, but found no reptiles. Only one species has been collected there.

1. **Uta stansburiana** Baird & Girard.

This lizard was secured on Ana Capa by Joseph Grinnell, September 4, 1903.

SAN NICOLAS ISLAND.

Mr. Slevin spent five days on San Nicolas Island, November 7-11, 1911. He found only the single species of lizard known from this island.

1. **Xantusia riversiana** Cope.

One hundred and twelve specimens (Nos. 30754 to 30864 and 35793) were secured. These are of various sizes, and show a wide range of coloration. They were found under flat stones just above the high tide line on the beaches. They are very active when disturbed. Careful comparison with our series from San Clemente and Santa Barbara islands has not disclosed any differences.

SANTA BARBARA ISLAND.

This island was visited by Mr. Slevin, October 4, 1912, and a few hours collecting resulted in finding only the one known species.

1. **Xantusia riversiana** Cope.

Twenty-one specimens (Nos. 35567 to 35587) were collected. They were found under rocks near the north end of the island. They seem identical with the specimens from San Nicolas and San Clemente islands.

SANTA CATALINA ISLAND.

One salamander, two lizards and a rattlesnake have been reported from Santa Catalina Island. We now are able to add a *Hyla,* a snake and two other species of lizards.

1. **Batrachoseps attenuatus** (Eschscholtz).

The salamanders of Catalina seem not to differ from those of the mainland.

2. **Hyla regilla** Baird & Girard.

Seventy-six specimens (Nos. 26898 to 26973) were collected near Avalon, July 23 to September 8, 1910, by John I. Carlson, and Mr. Slevin secured 17 (Nos. 35550 to 35566) at the isthmus of the island, September 29 and 30, 1912.

3. **Uta stansburiana** Baird & Girard.

One hundred and sixty-six specimens are before us. Eighty-four of these (Nos. 26812 to 26895) are from the vicinity of Avalon, July 23 to August 26, 1910, while 82 (Nos. 35468 to 35549) were secured near Johnson's Landing, at the north end of the island, September 29 and 30, 1912. Femoral pores in 34 specimens vary from 12 to 16; being 12 ten times, 13 eighteen times, 14 nineteen times, 15 eighteen times, and 16 three times.

4. **Xantusia riversiana** Cope.

Although Mr. Rivers stated that he had received this species from Catalina Island it is very doubtful if it really occurs there. Extended search by Mr. Carlson revealed no specimens, nor was Mr. Slevin more successful in finding it on this island, and no other collector has secured it there.

5. **Gerrhonotus scincicauda ignavus** Van Denburgh.

A single specimen (No. 26896) was collected at Avalon, August 13, 1910. There are 14 longitudinal rows of dorsal scales, and the dark lines on the belly run along the middles of the scales. Owing to the fact that this specimen is quite young, the temporals are not keeled, but the caudal keeling is typical of this subspecies.

6. **Eumeces skiltonianus** (Baird & Girard).

A single young individual (C. A. S. No. 26897) taken by Mr. Carlson at Avalon, August 1, 1910, establishes the first record of this species on Catalina Island.

7. **Pituophis catenifer** (Blainville).

Mr. Charles L. Camp has informed us that he found a good-sized gopher snake at the isthmus of the island, July 3, 1910, but that it escaped. We know of no specimen from Catalina in any museum.

8. **Crotalus oregonus** Holbrook.

The presence of rattlesnakes on Catalina was first recorded by Yarrow from a specimen taken there by Mr. Schumacher in 1876. This record has remained unconfirmed. Through the kindness of Dr. Grinnell and Mr. Charles L. Camp we

are now able to record a second specimen. This is No. 4323 in the collection of the Museum of Vertebrate Zoology, University of California, and was found by Mr. Camp at an elevation of about 25 feet near the isthmus of the island, July 7, 1910. It is a male with scales in 23 rows, gastrosteges 169, urosteges 23, supralabials 15-15, infralabials 14-14, preoculars 2-2, and postoculars 3-3.

SAN CLEMENTE ISLAND.

Mr. Slevin collected on San Clemente Island three days in October, 1912. He secured only the two kinds of lizards previously known from this island.

1. **Uta stansburiana** Baird & Girard.

Eighty-three specimens (Nos. 35710 to 35792) were secured. They seem not to differ from mainland lizards of this species.

2. **Xantusia riversiana** Cope.

One hundred and twenty-two of these lizards were collected on San Clemente Island by Mr. Slevin October 15 to 17, 1912. They were taken in the vicinity of Mosquito Harbor, and were found under stones near the beach and on the plateau several hundred feet above. There appears to be no difference between these lizards and the Xantusias of San Nicolas and Santa Barbara islands.

LOS CORONADOS.

Mr. R. H. Beck visited these islands in 1908, and collected several species not previously recorded.

1. **Batrachoseps attenuatus** (Eschscholtz).

Fifty-five (Nos. 13477 to 13531) were collected on East Coronado Island, February 15, 1908, and five (Nos. 13604 to 13608) are labeled merely Coronado Islands. They seem identical with specimens from the mainland. Costal grooves in 38 specimens are 18 on each side except in specimens Nos. 13509 and 13512, which have 19.

2. **Autodax lugubris** (Hallowell).

Two specimens (Nos. 13609 and 13610) labeled Coronado Islands were collected February 22, 1908. Their costal grooves are 12 on each side.

3. **Uta stansburiana** Baird & Girard.

Two specimens (13449 and 13450) were taken on East Coronado Island, February 15, 1908, and three others (13532 to 13534) are labeled South Coronado, April 9, 1908. Femoral pores vary from 10 to 15; being 10 once, 13 three times, 14 four times, and 15 twice.

4. **Anniella pulchra** Gray.

This species has not been recorded from any of the islands of the Pacific Coast. We now have at hand 10 specimens from the Coronado Islands. Nos. 13579 to 13582 were collected on South Coronado, April 6-7, 1908. Nos. 13471 to 13475 were secured on East Coronado, February 15, 1908. No. 13601 is labeled merely Coronado Islands, February 22, 1908.

5. **Gerrhonotus scincicauda ignavus** Van Denburgh.

This lizard was collected on North, South and East Coronado islands. From North Coronado we have four (Nos. 13444 to 13447) collected April 6-8, 1908. Twenty-four (Nos. 13535 to 13559) were collected on South Coronado, April 6-11, 1908. Eleven (Nos. 13451 to 13461) were taken on East Coronado, February 15, 1908. Five (Nos. 13590 to 13594) labeled merely Coronado Islands, were caught February 22, 1908.

All but No. 13590 have keeled temporals, and all have caudal keeling typical of *G. s. ignavus*. The dark ventral lines are along the middles of the scales in all 45 specimens. The longitudinal rows of dorsals are in 14½ rows in two specimens, 14 rows in 31, 12½ rows in 10, and 12 in two specimens.

6. **Eumeces skiltonianus** (Baird & Girard).

The collection includes 35 specimens of this skink. Only one of these (No. 13448) is from North Coronado Island, April 8, 1908. It has 26 rows of scales around the body. Twenty-five (Nos. 13560 to 13575 and 13595 to 13600) are from South Coronado, April 6-7, 1908. The scales around the middle of the body in 17 specimens counted are 24 in five and 26 in twelve. Nine (Nos. 13462 to 13470) were secured on East Coronado Island, February 15, 1908. The scales are in 24 rows in four and 26 in five of these specimens. The number of scales in a row along the back, from the head to a line con-

necting the posterior surfaces of the thighs, in 34 specimens from all the islands, varies from 55 to 61; being 55 three times, 56 four times, 57 five times, 58 eleven times, 59 five times, 60 five times, and 61 once.

7. **Hypsiglena ochrorhynchus** Cope.

A single specimen (No. 13602) collected February 22, 1908, is labeled Coronado Islands. The scales are in 21 rows, gastrosteges 178, anal divided, urosteges 44, supralabials 8-8, infralabials 10-10, preoculars 2-2, postoculars 2-2, loreal 1-1, temporals 1+2-1+2, genials equal.

8. **Pituophis catenifer** (Blainville).

Two specimens from South Coronado Island are at hand.

No. 13588, April 6, 1908, has 31 scale rows, 231 gastrosteges, 65 urosteges, supralabials 8-8, infraliabials 12-12, preoculars 2-2, postoculars 3-3, loreal 1-1, anterior genials longer.

No. 13589, April 11, 1908, has 35 scale rows, 229 gastrosteges, 71 urosteges, supralabials 9-9, infralabials 13-13, preoculars 2-2, postoculars, 3-3, loreal 1-1, temporals 3+3-3+3, anterior genials longer.

9. **Crotalus oregonus** Holbrook.

We have seven rattlesnakes of this species from these islands. Nos. 13583 to 13587 were collected on South Coronado, April 6-11, 1908. No. 13476 was secured on East Coronado, February 15, 1908, No. 13603 is labeled merely Coronado Islands, February 22, 1908. No. 13586 contains the remains of a lizard (*Eumeces*) which it had eaten. Variation in scales is shown in the following table:

SCALE COUNTS IN *CROTALUS OREGONUS*.

No.	Scales	Gastro steges	Uro steges	Supra labials	Infra labials	Pre oculars	Post oculars	Loreal
13476	25	171	19(1÷)	13—13	14—14	2—2	3—3	1—1
13583	25	177	19(9÷)	15—14	15—15	2—2	3—3	1—1
13584	27	176	20(1÷)	14—15	15—15	2—2	3—3	1—1
13585	29	171	18(7÷)	15—16	16—18	2—2	3—3	1—1
13586	25	172	15(1÷)	12—14	15—14	2—2	3—2	0—0
13587	25	168	22(4÷)	16—15	16—16	2—2	3—3	1—1
13603	25	179	17(1÷)	15—15	15—15	2—2	3—3	1—1

SAN MARTIN ISLAND.

1. **Uta martinensis** Van Denburgh.

Four specimens (Nos. 8673 to 8676) of this large-scaled lizard were collected on San Martin, July 11, 1905. None of these has the fifth toe reaching beyond the tip of the second, as in the original specimen. Femoral pores in No. 8674 are 13-14, and in 8676 they are 12-14. These lizards were secured on a sand beach near the north end of the island.

2. **Gerrhonotus scincicauda ignavus** Van Denburgh.

Our collection contains the type specimen and one other (No. 8677) collected July 11, 1905. The dorsals are in 14 rows. The temporal and caudal scales, as well as those on the limbs, are strongly keeled. The dark lines on the belly run along the middles of the rows of scales.

3. **Pituophis catenifer deserticola** Stejneger.

One specimen (No. 8678) collected on the north end of San Martin Island, July 11, 1905, is as brightly colored as specimens from the desert regions of California, Nevada and Arizona. The scales are in 31 rows, gastrosteges 236, urosteges 76, supralabials 8-9, infralabials 13-13.

SAN GERONIMO ISLAND.

We have secured two kinds of lizards from this island. Neither has been recorded previously.

1. **Uta stansburiana** Baird & Girard.

The collection includes 37 specimens (Nos. 8679 to 8714 and 8717) collected July 13, 1905. They seem not to differ appreciably from mainland specimens of this species. The femoral pores in 34 of these lizards vary from 12 to 16; being 12 eighteen times, 13 twenty-eight times, 14 fifteen times, 15 five times, and 16 twice.

2. **Anniella pulchra** Gray.

Two specimens (Nos. 8715-8716) of this footless lizard were secured July 13, 1905. One was found under a stone and the other was dug out of the soft earth under a bush.

GUADALUPE ISLAND.

No reptiles or amphibians have been collected on Guadalupe Island. The only information we have been able to secure as to their occurrence on this island is contained in a paper by Edward L. Greene, published in Bulletin No. 4 of the California Academy of Sciences, p. 220. He writes:

"Of reptiles I met with only two or three small lizards. In the moist parts of the plateau are plenty of shallow and tepid pools, fed by springs, but not even a tadpole was visible; and both soldiers and seamen assured me that none of the toad or frog race were ever seen or heard on Guadalupe. Most other islands off the coast of Mexico are commonly reported to be alive with snakes; but no one charges this remoter and more oceanic pile with harboring serpents of any sort; and during my seven days of incessant rambling and climbing I did not see one."

SAN BENITO ISLANDS.

There are three islands in this group—West, Middle and East San Benito. Only one species of lizard has been taken here. It occurs on all three islands.

1. **Uta stellata** Van Denburgh.

The type probably came from West San Benito Island. We now have 100 specimens (Nos. 8718 to 8817) collected on this island by Mr. Slevin, July 14, 1905; four (Nos. 8834 to 8837) taken on Middle San Benito, July 15, 1905; and 16 (Nos. 8818 to 8833) secured on East San Benito, July 15, 1905. Femoral pores in 50 specimens from West San Benito vary from 12 to 18; being 12 once, 13 seven times, 14 twenty-three times, 15 twenty-eight times, 16 eighteen times, 17 four times, and 18 three times. In 12 specimens from East Benito the femoral pores vary from 13 to 16; being 13 four times, 14 seven times, 15 nine times, 16 four times. In the four lizards from Middle San Benito Island the pores are 15 five times and 16 three times.

This small scaled member of the *Uta stansburiana* group is a ground dwelling species. It was most abundant on the lower portions of the islands.

CERROS ISLAND.

Mr. Slevin spent one day on Cerros Island. Owing probably to the shortness of his visit, he failed to find a number of species which have been recorded by others. On the other hand, he secured a lizard and a snake not previously taken on Cerros, so that 10 species are now known to live there.

1. **Hyla regilla** Baird & Girard.

Mr. Slevin did not secure this tree-toad, which has been reported by Dr. Streets and Mr. Belding.

2. **Crotaphytus wislizenii** Baird & Girard.

The Leopard Lizard is represented in our Cerros collection by two specimens (Nos. 8843 and 8844) taken by Mr. Slevin, July 18, 1905, in a dry wash in the south end of the island. No. 8843 has femoral pores 24-25, and No. 8844 has 23-22 pores.

3. **Uta stansburiana** Baird & Girard.

Mr. Slevin secured eleven Utas which seem typical of this species. These are Nos. 8845 to 8850, 8858 to 8859, and 8861 to 8863. Femoral pores in six of these vary from 11 to 15; being 11 once, 12 once, 13 three times, 14 four times, and 15 three times. This lizard had been taken on Cerros by both Dr. Streets and Mr. Belding.

4. **Sceloporus zosteromus** Cope.

Three specimens (Nos. 8842, 8856 and 8857) taken by Mr. Slevin, July 18, 1905, confirm Mr. Belding's record of this lizard. Femoral pores are 16-16, 17-18, 16-16.

5. **Phynosoma cerroense** Stejneger.

This horned toad was not found by Mr. Slevin. It is known from a single specimen taken by Mr. Belding.

6. **Verticaria hyperythra beldingi** (Stejneger).

This lizard also was not secured here by Mr. Slevin.

7. **Cnemidophorus multiscutatus** Cope.

Cerros is the type locality of this form. Nine whiptails (Nos. 8838 to 8841 and 8851 to 8855) were taken by Mr. Slevin. Femoral pores in eight of these vary from 18 to 22; being 18 twice, 19 three times, 20 five times, 21 five times, and 22 once.

8. **Cnemidophorus labialis** Stejneger.

We have no specimens of this species.

9. **Siagonodon humilis** (Baird & Girard).

No. 8860 is a dried specimen of this worm snake which was found dead on the sand in a dry wash, July 18, 1905.

10. **Crotalus exsul** Garman.

We have received no rattlesnakes from Cerros Island.

NATIVIDAD ISLAND.

We have two kinds of lizards secured by Mr. Slevin during a visit of a few hours, July 19, 1905.

1. **Uta stansburiana** Baird & Girard.

The collection includes 46 specimens (Nos. 8887 to 8932) of this *Uta*. The femoral pores in 40 specimens vary from 12 to 17; being 12 once, 13 six times, 14 sixteen times, 15 thirty-one times, 16 twenty times, and 17 six times.

2. **Cnemidophorus multiscutatus** Cope.

Twenty-three whiptails (Nos. 8864 to 8886) taken seem not to differ from those secured on Cerros Island. They were abundant about the deserted nesting burrows of sea birds. Femoral pores vary from 16 to 21; being 16 four times, 17 eight times, 18 nine times, 19 fifteen times, 20 six times, and 21 four times.

MAGDALENA ISLAND.

We have no additional material from this island. The following species have been recorded.

1. **Dipsosaurus dorsalis** Baird & Girard.
2. **Crotaphytus wislizenii** Baird & Girard.
3. **Uta nigricauda** Cope.
4. **Sceloporus zosteromus** Cope.
5. **Verticaria hyperthra beldingi** (Stejneger).
6. **Cnemidophorus rubidus** (Cope).

SANTA MARGARITA ISLAND.

We have nothing new to record regarding the reptiles of Santa Margarita. Five kinds have been reported.

1. **Callisaurus ventralis** (Hallowell).
2. **Sceloporus zosteromus** Cope.
3. **Cnemidophorus rubidus** Cope.
4. **Bascanion laterale fuliginosum** (Cope).
5. **Crotalus mitchellii** Cope.

SAN BENEDICTO ISLAND.

Mr. Slevin spent several hours on this island, July 26, 1905, with four other members of the expedition. No reptiles were seen by any member of the party, although careful search was made.

SOCORRO ISLAND.

1. **Uta auriculata** Cope.

This *Uta* remains the only reptile known from Socorro Island, except the green turtle which breeds here in numbers. Ninety-two specimens (Nos. 8933 to 9024) collected by Mr. Slevin, July 27-28, 1905, are now before us. In life their bright blue coloration makes them conspicuous on the black lava. The femoral pores are small and difficult to count. In 20 specimens they vary in number from 10 to 13; being 10 eight times, 11 eighteen time, 12 eleven times, and 13 three times.

CLARION ISLAND.

We now have no specimens from this island, the great fire of 1906 having destroyed those we had. The two species known from Clarion are a lizard and a snake:

1. **Uta clarionensis** Townsend.
2. **Bascanion anthonyi** Stejneger.

ANGEL DE LA GUARDIA ISLAND.

Three species of reptiles have been recorded from this island.

1. **Callisaurus ventralis** (Hallowell).

Callisaurus dracontoides, Townsend, Proc. U. S. Nat. Mus., XIII, 1890, p. 144.

Callisaurus ventralis, Van Denburgh, Proc. Cal. Acad. Sci., (2), V, 1895, p. 98.

Townsend has recorded the presence of this lizard on Angel Island, Gulf of California.

2. **Sauromalus hispidus** Stejneger.

Sauromalus ater, Streets, Bull. U. S. Nat. Mus., No. 7, 1877, p. 36; Townsend, Proc. U. S. Nat. Mus., XIII, 1890, p. 144.

Sauromalus hispidus Stejneger, Proc. U. S. Nat. Mus., XIV, 1891, p. 409.

Dr. Stejneger has described this species from four specimens collected by Dr. Streets and Mr. Townsend on Angel Island. Dr. Streets states that these lizards are abundant on the island.

3. **Crotalus mitchellii** Cope.

Crotalus pyrrhus Streets, Bull. U. S. Nat. Mus., No. 7, 1877, p. 39; Townsend, Proc. U. S. Nat. Mus., XIII, 1890, p. 144.

Crotalus mitchellii, Van Denburgh, Proc. Cal. Acad. Sci., (2), V, 159.

Dr. Streets was the first to report the presence of this rattlesnake on Angel Island. Mr. Townsend afterward collected one there.

TIBURON ISLAND.

We know of only one record of a reptile having been taken on Tiburon Island. Doubtless many species occur there.

1. **Elaps euryxanthus** Kennicott.

Dr. Streets has reported this coral snake from this island. (Bull. U. S. Nat. Mus., No. 7, 1877, p. 40).

SAN PEDRO MARTIR ISLAND.

Two species of lizards have been described by Dr. Stejneger as peculiar to this island.

1. **Uta palmeri** Stejneger.

Uta palmeri Stejneger, N. A. Fauna, No. 3, 1890, p. 106; Van Denburgh, Proc. Cal. Acad. Sci., (2), V, 1895, p. 106.

This species is allied to *Uta stansburiana.*

2. **Cnemidophorus martyris** Stejneger.

Cnemidophorus martyris Stejneger, Proc. U. S. Nat. Mus., XIV, 1891, p. 407; Cope, Trans. Am. Philos. Soc., XVII, 1, 1892, p. 36; Van Denburgh, Proc. Cal. Acad. Sci., (2), V, p. 125.

Two specimens were collected by Dr. Edward Palmer. They seem most closely allied to *C. melanostethus.*

CARMEN ISLAND.

Only one lizard has been reported from this island.

1. **Uta stansburiana** Baird & Girard.

Uta elegans, Townsend, Proc. U. S. Nat. Mus., XIII, 1890, p. 144.

Uta stansburiana, Van Denburgh, Proc. Cal. Acad. Sci., (2), V, 1895, p. 104.

Mr. Townsend collected this species on Carmen Island.

SAN JOSE ISLAND.

The following three kinds of lizards were collected by W. E. Bryant on San Jose Island in April and May, 1892.

1. **Uta microscutata** Van Denburgh.

Uta microscutata Van Denburgh, Proc. Cal. Acad. Sci., (2), V, 1895, p. 106.

Two specimens were secured.

2. **Sceloporus zosteromus** Cope.

Sceloporus zosteromus, Van Denburgh, Proc. Cal. Acad. Sci., (2), V, 1895, pp. 109, 110.

Two were taken.

3. **Verticaria sericea** Van Denburgh.

Verticaria sericea Van Denburgh, Proc. Cal. Acad. Sci., (2), V, 1895, p. 132.

This species is known only from the type specimen.

ESPIRITU SANTO ISLAND.

Two kinds of lizards are known to occur here, and a sea snake has been taken near this island.

1. **Sauromalus** sp?

Sauromalus ater, Belding, West Am. Sci., III, 1887, pp. 96, 97.
Sauromalus sp?, Stejneger, Proc. U. S. Nat. Mus., XIV, 1891, p. 411.

A medium-sized *Sauromalus* collected by Mr. Belding on this island is No. 12633 of the U. S. National Museum collection. Its specific identity is not definitely known.

2. **Uta stansburiana** Baird & Girard.

Uta stansburiana, Van Denburgh, Proc. Cal. Acad. Sci., (2), V, 1895, p. 105.

Two specimens were collected by Mr. W. E. Bryant in April, 1892.

3. **Hydrus platurus** (Linnæus).

Hydrus platurus, Mocquard, Nouv. Arch. du Mus., (4), I, p. 331.

Mocquard says:

Deux spécimens ont été capturés dan le golfe de Californie, au large de l' île Espiritu Santo.

ISABEL ISLAND.

The following list is taken from Stejneger's paper on the Tres Marias. We have no specimens from this island.

1. **Ctenosaura teres** (Harlan).
2. **Sceloporus boulengeri** Stejneger.
3. **Cnemidophorus gularis mexicanus** Peters.

LAS TRES MARIAS.

We have no specimens from these islands. Stejneger, in the *North American Fauna,* No. 14, 1899, pp. 63-71, records 16 species of land reptiles. One of these, *Diplotropis diplotropis* (Günther), is known only from specimens labeled merely the Tres Marias. The other species have been taken on the three islands, as follows:

MARIA MADRE ISLAND.

1. **Kinosternon integrum** Leconte.
2. **Crocodylus americanus** Laur.
3. **Phyllodactylus tuberculosus** Wiegmann.
4. **Anolis nebulosus** Wiegmann.
5. **Ctenosaura teres** (Harlan).
6. **Uta lateralis** Boulenger.
7. **Cnemidophorus mariarum** Günther.
8. **Boa imperator** Daudin.
9. **Oxybelis acuminatus** (Wied).
10. **Drymobius boddaerti** (Seetzen).
11. **Bascanion lineatum** Bocourt.
12. **Drymarchon corais melanurus** (Dum. & Bibron).
13. **Lampropeltis micropholis oligozona** (Bocourt).
14. **Agkistrodon bilineatus** (Günther).

MARIA CLEOFA ISLAND.

1. **Phyllodactylus tuberculosus** Wiegmann.
2. **Anolis nebulosus** Wiegmann.
3. **Ctenosaura teres** (Harlan).
4. **Cnemidophorus mariarum** Günther.

MARIA MAGDALENA ISLAND.

1. **Crocodylus americanus** Laur.
2. **Anolis nebulosus** Wiegmann.
3. **Cnemidophorus mariarum** Günther.
4. **Drymobius boddaerti** (Seetzen).
5. **Crotalus** sp?

CLIPPERTON ISLAND.

Clipperton Island is an atoll about three miles long, at one end of which may be seen a large black rock known as Clipperton Rock. The following species seems to be the only land reptile known from Clipperton Island.

1. **Emoia arundelii** (Garman).

Lygosoma arundelii Garman, Proc. N. Eng. Zool. Club, I, 1899, p. 61; Heller, Proc. Wash. Acad. Sci., Vol. V, 1903, p. 97.

Sixty-five specimens (Nos. 9025-9089) were collected on Clipperton Rock, August 10, 1905. These lizards appear to be more abundant on Clipperton Rock than elsewhere on the island. The following color description was taken from a living specimen, now number 9054, of the Academy collection:

Back very dark brown with a fairly distinct grayish stripe running from tip of snout to base of tail, gular region a little darker than belly, which is dull slate; under surface of hind legs yellowish.

We have not compared these lizards with *E. cyanura.*

The scales around the middle of the body were counted in 38 specimens and found to be in 28 rows in all. The scales in a row down the middle of the back from the base of the head to a line joining the posterior surface of the thighs vary from 51 to 56; being 51 twice, 52 six times, 53 ten times, 54 eight times, 55 eight times, and 56 four times.

COCOS ISLAND.

Two species of lizards from this island have been described.

1. **Sphærodactylus pacificus** Stejneger.

Sphærodactylus pacificus Stejneger, Proc. Biol. Sci. Wash., Vol. XVI, 1903, p. 3.

This species was described by Dr. Stejneger from five specimens collected in 1902 by Prof. Biolley, naturalist of the Museo Nacional, San José, Costa Rica. Although a careful search was made during a week's stay, September 5-12, 1905, by the Academy's Galapagos expedition, no specimens of this gecko were obtained.

2. **Anolis townsendi** Stejneger.

Anolis townsendi Stejneger, Bull. Mus. Comp. Zool., Vol. XXXVI, 1900, p. 163; Heller, Proc. Wash. Acad. Sci., Vol. V, 1903, p. 95.

One hundred and sixty specimens (Nos. 9090-9249) were collected in the vicinity of Wafer and Chatham bays, September 5-12, 1905. These lizards were abundant on the vines and trees along the water courses. When approached they would jump several inches from leaf to leaf, and when alighting would always turn so as to face the ground. The males at this season were seen displaying the gular pouch.